



HISTOMORPHOLOGICAL STUDY OF CHOLECYSTECTOMY SPECIMENS

Pathology

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ABSTRACT

Cholecystectomy is commonly performed operation in a surgical setting for symptomatic cholelithiasis. We aimed to conduct histological evaluation for all such cases an institutional level. The objectives were to confirm the clinico-radiological diagnosis, identification of unsuspected findings including incidental gallbladder malignancy, audit, research & quality control. Currently, there is a developing trend to consider selective histological evaluation of surgical specimen. This article discusses the need for histopathological evaluation of gallbladder specimens following cholecystectomy specimens removed routinely. The changing age of the population and the increasing incidence of cholelithiasis make it likely that the incidence of carcinoma of the gallbladder will also increase. In India, the incidence of gall bladder malignancy is variable in different geographical areas. Cholecystectomy for benign gallbladder diseases can lead to detection of previously undiagnosed gallbladder cancer during histopathological evaluation. Despite some controversy over its usefulness, histopathological evaluation of all gallbladder specimens is common in most hospitals.

KEYWORDS

Histopathology, Cholecystectomy, Gallbladder Cancer

BACKGROUND:

Histo-pathological examination is an important tool of prognostic and diagnostic value helping in further patient management. The College of American Pathologists and the UK Royal College of Pathologists have recommended that histopathological examination of surgical specimens should be selective because routine histopathology examination of appendicectomy and cholecystectomy specimens puts a huge burden on histopathologist and depletes hospital reserves.¹ In our institute, all surgical specimens are subjected for routine histopathological evaluation. A cursory study of literature suggested evidence of the benefits of histopathological examination of common surgical specimens like gallbladder and appendix.^{2,4} This study was undertaken to assess if a routine histopathological examination of gall bladder is still essential.

MATERIALS AND METHODS

A retrospective analysis of cases with gallbladder pathology diagnosed between 2013 to 2017 in the Pathology department of tertiary care hospital, Kolhapur was undertaken. We focused on the histomorphology in all cholecystectomy specimens. Histopathology reports of patients in whom cholecystectomy were performed were analyzed. A further prospective six months study done, at the department of pathology of tertiary care hospital, Kolhapur & a private laboratory at this locality was also undertaken and the results of 200 cases were analysed together. Small biopsies were excluded from this study.

RESULTS

Table 1: Age & Gender wise Distribution of Cases (n=200)

Age in years	Males (%)	Females (%)	Total (%)
11 to 20	0 (0)	3(1.66)	3(1.5)
21 to 30	1 (5.26)	5(2.76)	6(3)
31 to 40	2 (10.53)	81 (44.75)	83(41.5)
41 to 50	5 (26.32)	65(35.91)	70(35)
51 to 60	4 (21.05)	16(8.84)	20(10)
61 to 70	6 (31.58)	8 (4.42)	14(7)
71 to 80	1 (5.26)	3(1.66)	4(2)
Total	19(100)	181(100)	200(100)

From Table 1 can be clearly seen that females above 30 years of age suffer predominantly with gall bladder disease.

Table2: External Morphological Appearance of Specimens

External Appearance	No. of Specimens	%
Congestion	73	36.5
Swollen	93	46.5
Exudate on Serosa	30	15
Perforation	1	0.5
Shrunken With Unremarkable Serosa	2	1
As a g/w firm Mass	1	0.5
TOTAL	200	100
Findings in Cut Sections	No. of Specimens	%
Lumen filled with bile	35	33.75
Lumen with mucus	65	16.25
Lumen with growth	1	0.25
Lumen with gallstone/stones	99	49.75
TOTAL	200	100

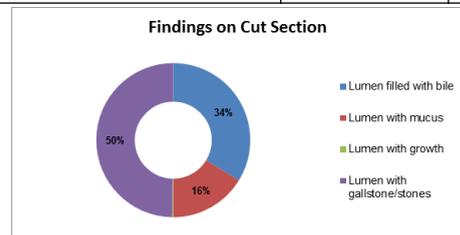


Table 3: Type of pathology & Presence of Gall Stones amidst specimens

Type of pathology	Total number of cases	Cases with gall stones
Chronic cholecystitis	165	162
Acute cholecystitis	28	28
Gall bladder adenocarcinoma	1	1
Chronic xanthogranulomatous cholecystitis	3	2
Gall bladder adenoma	1	1
Cholecystitis follicularis	2	2
TOTAL	200	196

Gall stones are found with most of benign as well malignant lasions(98%) in this study.

On routine histopathologic examination of cholecystectomy specimens, the most commonly found pathology is cholelithiasis. Among other pathology cholecystitis both acute and chronic is common. Cholecystitis follicularis, Xanthogranulomatous cholecystitis,

benign polyps, premalignant and malignant conditions are the less common pathological entities.

DISCUSSION

In our institution, all surgical specimens are subjected for routine histopathologic evaluation. Cholecystectomy are the most common procedures performed in a general surgical practice. Importance of routine histopathologic examination of the surgical specimens is now being debated because many incidental findings have little clinical significance.^{1,2,3} A small number of literature data studied the benefits of histopathologic examination of these two common surgical specimens.^{2,3}

The present study was carried out on 200 cholecystectomy specimens to determine the histopathological spectrum and frequency of gallbladder disease. Histopathology not only establishes a tissue diagnosis in gallstone disease but also contributes towards understanding its etiopathogenesis. It can also help in planning future treatment modality. In our present study, the age of the patients ranged from 20 to 60 years. GBC is not a common malignancy in developed countries except Japan.⁴ However, it is not unusual to observe it in some parts of India, Chile, Bolivia, and Mexico, and is the most common biliary cancer worldwide.^{5,6,7} Male to female ratio of gall bladder pathology is 1:2.3 in the present study. This data corroborates the fact that females are more commonly affected by the diseases of gallbladder. Other studies conducted by Mohan et al. and Siddique et al. also showed that females outnumbered the males with male to female ratio of 1:64 and 1:7 respectively.^{8,9} Majority of cholecystectomies are done for cholecystitis or cholelithiasis; hence, most gallbladder carcinomas are found incidentally. An important risk factor for gallbladder carcinoma is cholelithiasis, which is present in 95 % of cases. However, gallbladder cancer develops after 20 or more years only in 0.5 % of patients with gallstones.¹⁰ The most common pathology found in gallbladder is cholelithiasis followed by cholecystitis.¹¹

CONCLUSIONS

The most common pathology found in gallbladder is cholelithiasis followed by cholecystitis. Nowadays, a laparoscopic cholecystectomy is the treatment of choice and done routinely for gallstone diseases. It is difficult to diagnose distinctly benign and malignant lesions of gallbladder before surgery without histopathological examination. Despite the concept by people that routine histopathology of cholecystectomy specimen plays a dismal role in the management of most patients, it plays an important role in clinicopathologic correlation of various lesions of gallbladder and helps in diagnosing premalignant conditions like porcelain gallbladder or malignant conditions like carcinoma in situ and early carcinoma. This is the reason that each and every specimens of cholecystectomy should be evaluated in the histopathology laboratory.

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